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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/772,498	01/29/2001	Tod D. Wolf	TI-29703	1360

7590 03/18/2004

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EXAMINER

VARTANIAN, HARRY

ART UNIT	PAPER NUMBER
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2634

DATE MAILED: 03/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/772,498

Applicant(s)

WOLF ET AL.

Examiner

Harry Vartanian

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Detailed Action

Specification

1. On pages 4 and 12 reference is made to a "commonly-owned US Application number ..." but the number is not specified. Please correct the reference.

Claim Objections

1. Claim 4 is objected to because of the following informalities: The recites the limitation "the comparison result" on line 7 of the claim. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required. A recommended correction is "...a comparison result"
2. Claims 8 and 11 are objected to because of the following informalities: The recites the limitation "the turbo decoding based on the comparison result". There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required. A recommended correction is changing the preamble to "an abort criterion in turbo decoding" and changing the comparison result to "...a comparison result".

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear in to what the phrase "without variable division"

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means. Is it variable division of SNR parameters? Variable division of probability metrics?

Appropriate clarification is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 4, 7, 8, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Hagenauer et al(Us Patent 5,761,248). Regarding Claim 1, Hagenauer et al meets the following limitations:

A turbo decoding system(**abstract**), comprising:

a decoder module, using an adaptive abort criterion to halt iteration(**abstract**) wherein the adaptive abort criterion is executed without variable division. (**Column 3, Lines 1-45**)

Moreover, equations 2 and 3 show that variable division is not being using in the iterative abort system.

Regarding Claim 4, Hagenauer et al meets the following limitations:

An iterative decoder system, comprising:

a decoder module, wherein estimates of data symbols are generated through an iterative decoding process; (**abstract**) **fig 1**;

a comparison algorithm for comparing a derived quality attribute of the generated data symbol estimates to a predetermined threshold; (**Column 3, equation 4**)

wherein the comparison algorithm is executed without variable division; and (**Column 3, Lines 1-45**)

wherein decoding is aborted based on the comparison result. (**Column 3, Lines 1-45; Equation 4**)

Regarding Claim 7, Hagenauer et al meets the following limitations:

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wherein the quality attribute is generated without variable division. **(Column 3, Lines 1-45)**

Regarding Claim 8, Hagenauer et al meets the following limitations:

generating estimates of data symbols; **(Column 3, Lines 1-45)**

generating a quality attribute based on the estimates; **(Column 3, Lines 1-45)**

comparing the quality attribute to a predetermined threshold; **(Column 3, Lines 1-45)**

aborting the turbo decoding based on the comparison result; **(Column 3, Lines 1-45; Equation 4)**

wherein the quality attribute is generated without division functions. **(Column 3, Lines 1-45)**

Regarding Claim 10, Hagenauer et al meets the following limitations:

wherein the step of comparing is implemented without division functions. **(Column 3, Lines 1-45)**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry Vartanian whose telephone number is 703.305.8698. The examiner can normally be reached on 9-5:30 Mondays to Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703.305.4714. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Harry Vartanian
Examiner
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HV

A handwritten signature in black ink, appearing to read 'Stephen Chin', with a long horizontal line extending to the right.

STEPHEN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600